



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/028,494	12/20/2001	Do-Jun Park	678-732 (P9801)	2411
28249	7590	09/07/2006	EXAMINER	
DILWORTH & BARRESE, LLP 333 EARLE OVINGTON BLVD. UNIONDALE, NY 11553			PATEL, JAY P	
			ART UNIT	PAPER NUMBER
			2616	

DATE MAILED: 09/07/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/028,494

Applicant(s)

PARK, DO-JUN

Examiner

Jay P. Patel

Art Unit

2616

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 26 May 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-7, 9 and 10 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7, 9 and 10 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. This office action is in response to the remarks filed 5/26/2006.
2. Claims 1-7 and 9-10 are pending.
3. Claims 1-7 and 9-10 are rejected.

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claims 1, 6 and 7 are rejected under 35 U.S.C. 102(e) as being anticipated by McConnell et. al (US Patent 6944150 B1).
3. In regards to claim 1, McConnell discloses a network inclusive of a mobile station, coupled via an air interface to a BTS and the BTS in turn coupled to a BSC (see figure 2). The network further comprises of a wireless access gateway (WAG), a PSTN and a packet network (see figure 2). The network disclosed by McConnell anticipates network architecture for providing a packet voice call over a packet-base network to a circuit network terminal supporting wireless communication over a circuit-based network. Furthermore, the BTS, the BSC and the WAG together anticipate a radio access network (RAN) for providing a call service to the circuit network terminal.

In further regards to claim 1, the WAG may be arranged to communicate with a trunk gateway, which can covert between packet-based signals and baseband signals suitable for communication over circuit-switched PSTN (see figure 2, WAG 60, PSTN 66 and trunk gateway 64, and column 8, lines 22-27). The WAG in this instance, anticipates a mediation gateway connected to the RAN via a predetermined signaling interface of the circuit-based network. Furthermore, McConnell also discloses that a switch that routes voice traffic may query a service control point or a subscriber home location register (HLR) for guidance in routing a voice call. A switch or gateway that routes data traffic may query a different control point – such as an authentication, authorization and accounting server to find basic service level criteria (see column 2, lines 27-37). Such functionally of the gateway (WAG) anticipates, performing location registration, authorization, and mobility management to provide a packet voice call service to the circuit network terminal. Furthermore, the WAG is coupled via signaling channel 68 to a session manager70, which in turn coupled via a signaling channel 72 to a service agent 74. The service agent may then be coupled via a signaling channel 76 to a location server 78. These entities can respectively sit on one or more interconnected public or private packet-switched networks, so that communications with these entities may be transmitted as IP packets (see figure 2 and column 9, lines 59-67 and column 10, lines 1-9). These entities connected to the WAG anticipate making the circuit network terminal recognized as a packet network terminal in the packet-based network by performing IP registration for the circuit network terminal.

In further regards to claim 1, the WAG may be arranged to communicate with a trunk gateway 64 which can covert between packet-based signals and baseband signals suitable for communication over circuit-switched PSTN (see figure 2, WAG 60, PSTN 66 and trunk gateway 64, and column 8, lines 22-27). The trunk gateway's function anticipate an access gateway connected to the mediation gateway via a predetermined signaling interface, for providing predetermined traffic interfacing upon request form the mediation gateway. And as mentioned above since the WAG is part of the RAN, the access is also connected to the RAN to transmit voice traffic from the circuit network terminal to a terminal of a called party via the packet-based network.

In regards to claim 6, the trunk gateway can covert between packet-based signals and baseband signals suitable for communication over circuit-switched PSTN (see figure 2, WAG 60, PSTN 66 and trunk gateway 64, and column 8, lines 22-27). Therefore, the trunk gateway also anticipates, terminating a traffic packet form the packet-based network and interfacing the terminated traffic packet to the circuit network on a radio traffic channel.

In regards to claim 7, the session manager 70, generally functions to set up and manage communication sessions over the packet network 62, for the WAG. Once the session is setup, the session manager may notify the mobile station 52, and communication may then commence via the WAG between the mobile station and a remote terminal over the Packet network. The session manager anticipates controlling a session connection for the packet voice call service of the circuit network terminal upon request from the mediation gateway.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 2-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over McConnell et. al (US Patent 6944150 B1) in view of Brunner et. al (US Patent 5771275).

In regards to claim 2, McConnell teaches all the limitations of claim 1 as stated above. McConnell also teaches a mobile station or subscriber terminal may be programmed with an application to function as a SIP client (terminal that may communicate with a SIP server to establish a communication session). Both the WAG and the session manager may function as SIP proxy servers, why pass along session initiation requests to facilitate session set up (column 13, lines 17-30). The proxy server functionality of the WAG is obvious over a packet network supporter for converting the user profile, service profile and service quality class information received from the circuit network supporter to a signal for SIP registration, assignment, and call setup processing, and transmitting the converted signal to the packet-based network.

McConnell fails to teach a circuit network supporter for receiving information about a user profile, service profile, and service quality class of the circuit network terminal from the RAN via the predetermined signaling interface. Brunner teaches the above-mentioned limitation. Brunner discloses a mobile switching center 14 connected

to a data base 22 comprising of a home location register (HLR) by means of signaling link 24 providing a known IS-41 type connection. The data base 22 stores information concerning the mobile stations 16 comprising location information and service information (see figure 1 and column 3, lines 38-43). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine the database disclosed by Brunner with the mediation gateway disclosed by McConnell. The motivation comes from McConnell where it is stated; "a need exists for an improved arrangement for providing services to data sessions and for providing services integrally across assorted types of traffic such as voice and data" (see column 3, lines 19-22).

In regards to claims 3 and 4, the HLR is connected to the MSC via IS-41 type connection and stores location information and service information of the mobile stations as stated above. Furthermore, the IS-41 type of connection can be an SS7 type connection with the MSC. Therefore, Brunner teaches all the limitations of claims 3 and 4 and therefore it would have been obvious to combine the HLR and SS7 type connections disclosed by Brunner with the mediation gateway taught by McConnell. The motivation used with regards to claim 2 is also applicable to claims 3 and 4.

In regards to claim 5, McConnell discloses that the service agent, which is connected to the session manager, records an indication in the context record for the subscriber reflecting that the session has begun. The context record may be used for accounting purposes including post-processing billing (see column 20, lines 30-37). Furthermore, the PDSN can refer to the AAA server to verify that a given subscriber is authorized to communicate data over the packet network to obtain QOS parameters

(see column 7, lines 21-28). The AAA server and the service agent functions are obvious over the packet network supporting authorization and billing for the circuit network terminal over the packet based network.

6. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Haskal (US Publication 2001/0036172 A1) in view of Chang et al (US Patent 7062265 B1).

7. In regards to claim 9, Haskal discloses in figure 3, an architecture to place a wireless voice over IP call. The source transceiver/base station 120 forwards packetized voice data to a mobile switching office 124 (MTSO 124) (the base station 20 reads on a radio access network). The MTSO 124, if the call is a long distance call, routes the voice data packet over an unchannelized T-1 line 145 (circuit-based network interface) to a source interface device 125 (mediation gateway) (see paragraphs 32 and 33 on page 3).

The source interface device 125 reformats the voice data packet into a format compatible with the communications protocol of the data network 138 (typically TCP/IP) and outputs the reformatted voice data packet to the source gateway 132 (access gateway) (transmitting IP protocol information generated for the circuit network terminal from the mediation gateway to an access gateway) (see paragraphs 33 and 34 on page 3).

The source gateway 132 routes reformatted data over the data network 138 (connecting the circuit network terminal to the packet-based network using the IP

protocol information and providing the packet voice call service to the circuit network terminal by the access gateway).

In further regards, Haskal fails to teach a call origination request. Chang discloses in figure 3, step 60 a call-originating request from a wireless terminal 42 in figure 1. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate a call origination request feature taught by Chang in the VoIP system disclosed by Haskal. The motivation to do so would be to provide a channel setup feature before a call is actually placed.

8. In regards to claim 10, figure 3 in Haskal illustrates a mobile terminal 116, a base station 120 and an MTSO 124 (paging the circuit network terminal through a RAN via a circuit based network interface by the mediation gateway).

The source interface device 125 reformats the voice data packet into a format compatible with the communications protocol of the data network 138 (typically TCP/IP) and outputs the reformatted voice data packet to the source gateway 132 (access gateway) (transmitting IP protocol information generated for the circuit network terminal from the mediation gateway to an access gateway) (see paragraphs 33 and 34 on page 3).

The source gateway 132 routes reformatted data over the data network 138 (connecting the circuit network terminal to the packet-based network using the IP protocol information and providing the packet voice call service to the circuit network terminal by the access gateway).

In further regards, Haskal fails to teach a call termination request placed to a mediation gateway by the packet-based network. Chang discloses in figure 3, step 60 a call termination request from a wireless terminal 42 in figure 1. Therefore, it would have been obvious to one skilled in the art at the time the invention was made to incorporate a call termination request feature taught by Chang in the VoIP system disclosed by Haskal. The motivation to do so would be to provide a channel teardown feature before to terminate a session.

Response to Arguments

1. Applicant's arguments filed 5/26/2006 have been fully considered but they are not persuasive.
2. On page 3, in lines 1-4 of the remarks that McConnell fails to teach allowing "the circuit network terminal to be recognized as a packet network terminal in the packet based network." The examiner respectfully disagrees.

McConnell teaches that the Wireless access gateway (WAG 60) in figure 2 is coupled via signaling channel 68 to a session manager70, which in turn coupled via a signaling channel 72 to a service agent 74. The service agent may then be coupled via a signaling channel 76 to a location server 78. These entities can respectively sit on one or more interconnected public or private packet-switched networks , so that communications with these entities may be transmitted as IP packets (see figure 2 and column 9, lines 59-67 and column 10, lines 1-9). These entities connected to the WAG anticipate making the circuit network terminal recognized as a packet network terminal

in the packet-based network by performing IP registration for the circuit network terminal.

Furthermore on page 3, lines 6-9 the applicant argues that McConnell fails to teach the mediation gateway performing conversion of signals suitable for a function of authorizing and billing for the circuit network terminal. The examiner respectfully disagrees.

McConnell also discloses that a switch (WAG 60) that routes voice traffic may query a service control point or a subscriber home location register (HLR) for guidance in routing a voice call. A switch or gateway that routes data traffic may query a different control point – such as an authentication, authorization and accounting server to find basic service level criteria (see column 2, lines 27-37). Such functionality of the gateway (WAG) anticipates, performing location registration, authorization, and mobility management to provide a packet voice call service to the circuit network terminal.

The applicant also argues on page 3, lines 9-10 that McConnell fails to teach the mediation gateway performing SIP registration, arrangement and call setup. The examiner respectfully disagrees. It is noted that the claims do not mention SIP registration, arrangement and call setup. However, the examiner shows in the following paragraph that McConnell teaches SIP registration, arrangement and call setup.

In column 10, lines 9-24, McConnell discloses a procedure the WAG 60 in figure 2 carries out for a session initiation request to session manager 70.

Furthermore, the applicant argues that McConnell fails to teach a mediation gateway for performing an IP registration for the circuit network terminal. The examiner respectfully disagrees.

McConnell teaches that the WAG is coupled via signaling channel 68 to a session manager 70, which in turn is coupled via a signaling channel 72 to a service agent 74. The service agent may then be coupled via a signaling channel 76 to a location server 78. These entities can respectively sit on one or more interconnected public or private packet-switched networks, so that communications with these entities may be transmitted as IP packets (see figure 2 and column 9, lines 59-67 and column 10, lines 1-9). These entities connected to the WAG anticipate making the circuit network terminal recognized as a packet network terminal in the packet-based network by performing IP registration for the circuit network terminal.

3. Applicant's arguments with respect to claims 9 and 10 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay P. Patel whose telephone number is (571) 272-3086. The examiner can normally be reached on M-F 9:00 am - 5:00 p.m..

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hassan Kizou can be reached on (571) 272-3088. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 2616

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

JPP 9/6/06

Jay P. Patel
Assistant Examiner
Art Unit 2616



HASSAN KIZOU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600